State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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February 20, 2003

TO: Minerals File

FROM: Paul Baker, Senior Reclamation Biologist

RE: Site Inspection, DKG Quarry, Diamond K Gypsum, M/015/041, Emery County, Utah

Date of Inspection:	February 10, 2003
Time of Inspection:	about 3:00 to 5:00 p.m.
Conditions:	Mostly clear, 30's
Participants:	Karen Palmer, Clint Henrie, and Chris Allred, Diamond K; Susan White and Paul Baker, DOGM

Purpose of Inspection:

We wanted to compare maps of the disturbed area with the actual disturbance and to look at reclaimed areas for possible release.

Getting to the site:

It is easy to get to the site. Take the Moore exit from I-70 and head northwest for about 3-4 miles (approximate—we didn't check it on the odometer). This is the first gypsum mine going this direction. If you go too far, you will find Georgia Pacific's Eagle Canyon Mine.

Observations:

The operation consists of scraping off the topsoil and overburden then using a rotomill (Photo 3) to break up the top layer of gypsum. This is then put into a pile and loaded onto trucks with a front end loader. There is no blasting and no pit. This makes for a very clean operation (Photo 1).

The operator has been actively doing concurrent reclamation, and the grading generally matches surrounding terrain. There is one feature (just to the right of center in Photo 2) next to the channel that the Bureau of Land Management apparently requested be left, but Ms. White and I did not think it matches adjacent areas very well. The areas reclaimed most recently have contour furrows.

We looked primarily at revegetation in area "B" which was reclaimed in 1998. Perennial vegetation in the reclaimed areas was mostly very sparse, but there were a few areas with good cover from smooth brome, crested wheatgrass, and a saltbush. We are not certain what species of saltbush, but it could have been Castle Valley saltbush, trident saltbush, or a hybrid. Most of the vegetation in reclaimed areas was Russian thistle, halogeton, and kochia.

Although I didn't notice it, it was Ms. White's impression that the surface of the reclaimed areas was compacted. We were told that at least some of the reclaimed areas had been worked extensively to get the contours right, and this could be the reason for any compaction.

Conclusions and Recommendations:

I would like to work closely with the operator to see if we can get more vegetation established in the reclaimed areas. The operator has seeded area B twice and has apparently followed Division and BLM guidance carefully. I believe it would be beneficial to rip these areas perhaps 18 inches deep and make sure this is done parallel to the contour. It appears that even crested wheatgrass is only able to survive in swales where water can gather, but I believe it should be possible to get a reasonable stand of Castle Valley saltbush and possibly one or two grasses like Indian ricegrass and galleta.

The revegetation cover does not meet the success standard. I committed to revisit the site in the spring or summer and make sure, but I do not anticipate that my assessment will change unless something drastic happens between now and then. I also promised to look at the amount of vegetation cover in adjacent undisturbed areas so we could establish a baseline success standard for areas that will be disturbed in the future.

I would like to know what species have been planted in the past and use this information to design a new seed mix. Although the soils and climate in the area make revegetation very difficult, and although using the right techniques does not guarantee success, it is important to do everything reasonably possible to have it work.

I strongly suggest that the operator put a sign on the topsoil stockpile so the topsoil is not used for fill or otherwise wasted.

jb
cc: Karen Palmer, DHG
Dean Nyffeler, Price BLM
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ATTACHMENT
Inspection Date: February 10, 2003; Report Date: February 20, 2003
Photographs
M/015/041, DKG Mine, Diamond K Gypsum

Photo 1. Overview of the Diamond K Mine.

Photo 2. Just to the right of center is a feature that does not blend well with the adjacent regraded area. The operator was apparently told to leave this to divert water in the drainage away from the regraded area.

Photo 3. Rotomill.

Photo 4. Reclaimed area. The plants in this photo are weeds; there are few perennial plants.